

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A process for preparation of a dispersion of a self dispersing, synergistic poly (urethane-co-acrylics)-poly(urethane-co-acrylic) copolymer useful as coating material, said process ~~comprises~~ comprising the steps of:

a. treating a polyol, having molecular weight in the range of 500-3000, ~~having general formula $(OH-R-OH)_n$, where R represents an alkyl group and n is any integer between 4 and 10,~~ with 150 -200 mole % of a (cyclo)aliphatic or aromatic isocyanate of (cyclo) aliphatic or aromatic type at a temperature in the range of 40-150°C. under a nitrogen atmosphere, for a period of minimum 2 hours to obtain an isocyanate terminated pre-polymer;

b. adding 50-100 mole %, based on the (cyclo)aliphatic or aromatic isocyanate, ~~of an iniferter diol isocyanate, having essentially tetraphenylethane~~ and 0.1-0.3 mol % of catalyst to the isocyanate terminated pre-polymer, in an organic solvent, under agitation at a temperature not exceeding 40°C. for a period in the range of 15-30 hrs to obtain an iniferter incorporated polyurethane;

c. treating 25-400% w/w of ~~acrylic monomer, characterized essentially by a vinyl monomer selected from the group consisting of vinyl~~ monomers containing carboxyl groups or sulfonic acid groups, with the iniferter incorporated polyurethane for a minimum of 12 hrs hours at a temperature in the range of 50-80°C. to obtain a urethane-co-acrylic polymer;

d. adding 0.01-0.1 mole % of base to the urethane-co-acrylic polymer, ~~as~~ formed in step (iii)(c), under agitation at a temperature in the range of 30-80°C. for a period of minimum 1-~~hr~~ hour to obtain a slurry, and

e. dispersing the slurry in 150-200% v/v of water to obtain the dispersion of the poly(urethane-co-acrylic) copolymer-dispersion.

2. (Currently Amended) A process as claimed in claim 1, wherein the polyol ~~used~~ is selected from ~~a group comprising, Polyethylene~~ the group consisting of polyethylene glycol,

polypropylene glycol, polyoxypropylene glycol, poly (tetramethylene oxide) glycol, and polycaprolactone diol.

3. (Currently Amended) A process as claimed in claim 1, wherein the (cyclo) aliphatic or aromatic isocyanate is selected from the group consisting of isocyanates used is selected from a group comprising, hexamethylene diisocyanate, isophorone diisocyanate, p-phenylene diisocyanate, toluene diisocyanate, and diphenylmethane diisocyanate.

4. (Currently Amended) A process as claimed in claim 1, wherein the organic solvent is selected from the group consisting of used is selected from a group comprising, dimethyl sulphoxide, dimethyl formamide, dimethyl acetamide, acetone, butan-2-one, carbon tetrachloride, and ~~n-methyl~~ N-methyl pyrrolidone.

5. (Currently Amended) A process as claimed in claim 1, wherein the catalyst is selected from the group consisting of used is selected from a group comprising of triethylene diamine, piperazine, dibutyl tin dilaurate, stannous octoate, dioctyl tin dilaurate, and diaza bicyclo octane.

6. (Currently Amended) A process as claimed in claim 1, wherein the iniferter is selected from the group consisting of used is selected from tetraphenylethane diol and dithio carbamate.

7. (Currently Amended) A process as claimed in claim 1, wherein the acrylic vinyl monomer is selected from the group consisting of used is selected from a group comprising, acrylic acid, methacrylic acid, methylene succinic acid, and 4-styrene sulfonic acid.

8. (Currently Amended) A process as claimed in claim 1, wherein the base is selected from the group consisting of used is selected from primary amines, secondary amines, tertiary amines, and/or alkali metal hydroxide, and combinations thereof like triethyl amine, trimethyl amine, triisopropyl amine, N,N'-dimethyl aniline, N,N'-diethanol amine, NaOH and KOH, ~~either individually or in combination.~~

9. (Currently Amended) A process as claimed in claim 1, wherein the said synergistic poly(urethane-co-acrylic) copolymer polyurethane-polyvinyl polymer has cold crack resistance up to -15°C.

10. (Currently Amended) A process as claimed in claim 1, wherein the ~~said synergistic poly(urethane-co-acrylic) copolymer-polyurethane-polyvinyl polymer~~ has film adhesion strength about 7.2 N/cm.

11. (Currently Amended) A process as claimed in claim 1, wherein the ~~said synergistic poly(urethane-co-acrylic) copolymer-polyurethane-polyvinyl polymer~~ has rub fastness up to 4 dry.

12. (Withdrawn) A self dispersing water based synergistic polyurethane-polyvinyl block copolymer useful as coating material.

13. (Withdrawn) A polyurethane-polyvinyl block copolymer as claimed in claim 12, wherein the said polymer has cold crack resistance up to -15°C.

14. (Withdrawn) A polyurethane-polyvinyl block copolymer as claimed in claim 12, wherein the said polymer has film adhesion strength about 7.2 N/cm .

15. (Withdrawn) A polyurethane-polyvinyl block copolymer as claimed in claim 1, wherein the said polymer has rub fastness up to 4 dry.

16. (New) A process as claimed in claim 8, wherein the base is selected from the group consisting of triethyl amine, trimethyl amine, triisopropyl amine, N,N'-dimethyl aniline, N,N'-diethanol amine, NaOH, KOH, and combinations thereof.

17. (New) A process as claimed in claim 1, wherein the iniferter is tetraphenylethane diol.

18. (New) A process as claimed in claim 17, wherein the polyol is selected from the group consisting of polyethylene glycol, polypropylene glycol, polyoxypropylene glycol, poly (tetramethylene oxide) glycol, and polycaprolactone diol.

19. (New) A process as claimed in claim 18, wherein the poly(urethane-co-acrylic) copolymer has cold crack resistance up to -15°C, a film adhesion strength about 7.2 N/cm, and a rub fastness up to 4 dry.

20. (New) A process as claimed in claim 19, wherein the vinyl monomer is selected from the group consisting of acrylic acid, methacrylic acid, methylene succinic acid, and 4-styrene sulfonic acid.